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EXAMINER	
SALL, EL HADJI MALICK	

ART UNIT	PAPER NUMBER
2157	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/898,800	APOSTOLOPOULOS ET AL.	
	Examiner	Art Unit	
	El Hadji M Sall	2157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 July 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-59* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-59* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. ***DETAILED ACTION***

This action is responsive to the application filed on July 3, 2001. Claims 1-59 are pending. Claims 1-59 represent method for assigning a streaming media session to a server in fixed and mobile streaming media systems.

2. ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goldszmidt et al. (referred to hereafter as Gold) U.S. 6,195,680 in view of Odamura (referred to hereafter as Od) U.S. 6,763,248.

Gold teaches the invention substantially as claimed including client-based dynamic switching of streaming servers for fault-tolerance and load balancing (abstract).

As to claim 1, Gold teaches a method for assigning servers to provide multiple description bitstreams to a base station, said method comprising the steps of:

a) upon receiving a request from a client to have media data streamed thereto, analyzing a plurality of servers to determine a first candidate server for providing a first multiple description bitstream along a first path and a second candidate server for providing a second multiple description bitstream along a second path (abstract, Gold

discloses...the client requests a multimedia stream through a control server or gateway which routes requests to the multimedia servers; and the client receives the stream directly from a selected (primary) server. The client automatically detects load imbalances and/or failures (complete or partial) and dynamically switches to a secondary server in order to continue receiving the real-time multimedia stream...)

b) sending to said first candidate server a request for said first candidate server provide said first multiple description bitstream (column 17, lines 49-52, Gold discloses a client requesting a real-time data stream; assigning the client to both a primary server...in response to said request)

c) sending to said second candidate server a request for said second candidate server provide said second multiple description bitstream (column 19, lines 65-67, Gold discloses the control server communicating an identifier of...the secondary server to the client, in response to the client requesting the data stream).

Gold fails to teach a base station in a).

However, Od teaches radio network communication system. Od teaches a base station (figure 4, item 203i).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gold in view of Od to provide upon receiving a request from a client to have media data streamed thereto, analyzing a plurality of servers to determine a first candidate server for providing a first multiple description bitstream to said base station along a first path and a second candidate server for providing a second multiple description bitstream to said base station along a second path. One would be motivated to do so to allow the division of the received file into sub-files (abstract)

Gold fails to teach a base station in b).

However, Od teaches a base station (figure 4, item 203i).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gold in view of Od to provide sending to said first candidate server a request for said first candidate server provide said first multiple description bitstream to said base station. One would be motivated to do so to allow the division of the received file into sub-file (abstract)

Gold fails to teach a base station in c).

However, Od teaches a base station (figure 4, item 203i).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gold in view of Od to provide sending to said second candidate server a request for said second candidate server provide said second multiple description bitstream. One would be motivated to do so to allow the division of the received file into sub-files (abstract)

As to claim 2, Gold teaches the method for assigning server to provide multiple description bitstreams as recited in claim 1.

Gold fails to teach step a) comprises receiving said request from said mobile client at a base station, and forwarding said request to one of said plurality of servers.

However, Od teaches step a) comprises receiving said request from said mobile client at a base station, and forwarding said request to one of said plurality of servers (abstract, Od discloses the base station includes (c1) a data transceiver which makes radio-communication with the client terminal to receive data from and transmit data to the client terminal, and which, when the request is made by the client terminal, transmits the request to the server and all data constituting the desired file, from the server).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gold in view of Od to provide teaches step a) comprises receiving said request from said mobile client at a base station, and forwarding said request to one of said plurality of servers. One would be motivated to do so to allow transmission of each of the sub-file to the client terminal (abstract).

As to claim 3, Gold teaches the method for assigning servers to provide multiple description bitstreams to a base station as recited in claim 1, wherein step a) comprises identifying, from said plurality of server, servers having a route to provide identified servers (column 3, lines 33-36, Od discloses the control server assigns

different identifiers to the streaming servers for delivering the multimedia data, and uses these identifiers to group these streaming servers into two or more different sets)

Gold fails to teach a base station.

However, Od teaches a base station (figure 4, item 203i).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gold in view of Od to provide a base station. One would be motivated to do so to allow the division of the received file into sub-file.

As to claim 4, Gold teaches the method for assigning server to provide multiple description bitstreams to a base station as recited in claim 3, wherein step a) comprises intelligently evaluation network parameters for each of said identified servers (column 5, lines 38-41, Gold discloses The control server assigns different identifiers to the streaming servers for delivering the multimedia data, and uses these identifiers to group the streaming servers into two or more different sets (1.5, 1.6)).

As to claim 5, Gold teaches the method for assigning server to provide multiple description bitstream as recited in claim 4, wherein step a) comprises intelligently evaluation system parameters such as server and network parameters selected from the group comprising:

Computation load (column 1, lines 24-25, Gold discloses a cluster of computing nodes (also called a multi-node cluster) to handle the load; column 12, lines 22-24, Gold discloses he BAMBA player (client software) at the receiving client automatically calculates how much data to pre-load in order to maintain continuous playback);

Network bandwidth (column 12, lines 17-20, Gold discloses BAMBA not only achieves the low-bit-rate goal, but can also be extended to support higher-bit-rate streams to provide higher-quality streaming over intranets or higher-bandwidth Internet connections); and

Potential that either said first or said second multiple description bitstreams are previously stored thereon for each of said identified servers (abstract, Gold discloses... the client receives the stream directly from a selected (primary) server; column 11,

lines 26-27, Gold discloses these audio and video files are downloaded from a server and stored at the client before they are played).

Gold fails to teach a base station.

However, Od teaches a base station (figure 4, item 203i).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gold in view of Od to provide network bandwidth to base station. One would be motivated to do so to allow temporary contact with the mobile units when the data channel is lost.

As to claim 6, Gold teaches the method for assigning servers to provide multiple description bitstreams as recited in claim 1, further comprising the step of:

d) upon receiving said request for said first candidate server to provide said first multiple description bitstream along said first path, performing an admission process to determine whether said first candidate server will provide said first multiple description bitstream along said first path (column 5, lines 55-64, Gold discloses each instance of the streaming process begins with a client agent 1.8 connecting to the control server 1.1 requesting the multimedia stream. The control server then assigns and redirects the client to one of the streaming servers in either of the two groups (1.5, 1.6). The assignment can be based on a conventional round-robin approach or based on some load-balancing heuristics. For example, the server 1.1 can redirect the client 1.8 to a streaming server based on a weighted round-robin approach, or to a streaming server having a lowest utilization rate; abstract, Gold discloses the client receives the stream directly from a selected (primary) server).

Gold fails to teach a base station along said first path.

However, Od teaches a base station along said path (figure 4, item 203i).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gold in view of Od to provide upon receiving said request for said first candidate server to provide said first multiple description bitstream to said base station along said first path, performing an admission process to determine whether said first candidate server will provide said first multiple description bitstream to said

base station along said first path. One would be motivated to do so to allow temporary contact with the mobile units when the data channel is lost.

As to claim 7, Gold teaches the method for assigning server to provide multiple description bitstreams as recited in claim 1, further comprising the step of:

d) upon receiving said request for said second candidate server to provide said second multiple description bitstream along said second path, performing an admission process to determine whether said second candidate server will provide said second multiple description bitstream along said second path (column 5, lines 55-64, Gold discloses Each instance of the streaming process begins with a client agent 1.8 connecting to the control server 1.1 requesting the multimedia stream. The control server then assigns and redirects the client to one of the streaming servers in either of the two groups (1.5, 1.6). The assignment can be based on a conventional round-robin approach or based on some load-balancing heuristics. For example, the server 1.1 can redirect the client 1.8 to a streaming server based on a weighted round-robin approach, or to a streaming server having a lowest utilization rate; abstract, Gold discloses the client automatically detects load imbalance and/or failures (complete of partial) and dynamically switches to a secondary server).

Gold fails to teach a base station along said second path.

However, Od teaches a base station along a second path (figure 4, item 203i).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gold in view of Od to provide upon receiving said request for said second candidate server to provide said second multiple description bitstream to said base station along said second path, performing an admission process to determine whether said second candidate server will provide said second multiple description bitstream to said base station along said second path. One would be motivated to do so to allow temporary contact with the mobile units when the data channel is lost.

As to claim 8, Gold teaches method for assigning servers to provide multiple description bitstreams to a base station as recited in claim 6, wherein said admission

process of step d) provides an outcome selected from the group comprising: granting permission to provide said first multiple description bitstream, refusing permission to provide said first multiple description bitstream, and granting permission to provide said first multiple description bitstream with the identification an existing multiple description bitstream for potential redistribution to another of said plurality of servers (abstract, Gold discloses The client requests a multimedia stream through a control server or gateway which routes requests to the multimedia servers; and the client receives the stream directly from a selected (primary) server. The client automatically detects load imbalances and/or failures (complete or partial) and dynamically switches to a secondary server in order to continue receiving the real-time multimedia stream with minimal disruption and while maintaining a balanced load across multiple servers in a distributed network environment; column 3, lines 33-36, Gold discloses the control server is preferably a scalable server that is capable of handling a requests from a large number of incoming client agents and redirecting them to the streaming servers that are providing the multimedia data. The control server assigns different identifiers to the streaming servers for delivering the multimedia data, and uses these identifiers to group these streaming servers into two or more different sets).

Gold fails to teach a base station.

However, Od teaches a base station (figure 4, item 203i).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gold in view of Od to provide an outcome selected from the group comprising: granting permission to provide said first multiple description bitstream to said base station, refusing permission to provide said first multiple description bitstream to said base station, and granting permission to provide said first multiple description bitstream to said base station with the identification an existing multiple description bitstream for potential redistribution to another of said plurality of servers. One would be motivated to do so to allow the transmission of each of the sub-files to the client terminal (see abstract).

As to claim 9, Gold teaches the method for assigning server to provide multiple description bitstreams as recited in claim 7, wherein said admission process of step d) provides an outcome selected from the group comprising: granting permission to provide said second multiple description bitstream, refusing permission to provide said second multiple description bitstream, and granting permission to provide said second multiple description bitstream with the identification an existing multiple description bitstream for potential redistribution to another of said plurality of servers (abstract, Gold discloses The client requests a multimedia stream through a control server or gateway which routes requests to the multimedia servers; and the client receives the stream directly from a selected (primary) server. The client automatically detects load imbalances and/or failures (complete or partial) and dynamically switches to a secondary server in order to continue receiving the real-time multimedia stream with minimal disruption and while maintaining a balanced load across multiple servers in a distributed network environment; column 3, lines 33-36, Gold discloses the control server is preferably a scalable server that is capable of handling a requests from a large number of incoming client agents and redirecting them to the streaming servers that are providing the multimedia data. The control server assigns different identifiers to the streaming servers for delivering the multimedia data, and uses these identifiers to group these streaming servers into two or more different sets).

Gold fails to teach a base station.

However, Od teaches a base station (figure 4, item 203i).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gold in view of Od to provide an outcome selected from the group comprising: granting permission to provide said second multiple description bitstream to said base station, refusing permission to provide said second multiple description bitstream to said base station, and granting permission to provide said second multiple description bitstream to said base station with the identification an existing multiple description bitstream for potential redistribution to another of said plurality of servers. One would be motivated to do so to allow the transmission of each of the sub-files to the client terminal (see abstract).

Claims 10-23 do not teach or define any new limitations above claims 1-9, and therefore are rejected for similar reasons.

4. Claims 24-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goldszmidt et al. (referred to hereafter as Gold) U.S. 6,195,680 in view of La Porta (referred to hereafter as La) U.S. 6,654,359.

Gold teaches the invention substantially as claimed including client-based dynamic switching of streaming servers for fault-tolerance and load balancing (abstract).

As to claim 24, Gold teaches the method for assigning servers to provide multiple description bitstreams to respective base stations, said method comprising the steps of:

a) upon receiving a request from a mobile client to have media data streamed thereto, analyzing a plurality of servers to determine a first candidate server for providing a first multiple description bitstream along a first path and a second candidate server for providing a second multiple description along a second path (abstract, Gold discloses...the client requests a multimedia stream through a control server or gateway which routes requests to the multimedia servers; and the client receives the stream directly from a selected (primary) server. The client automatically detects load imbalances and/or failures (complete or partial) and dynamically switches to a secondary server in order to continue receiving the real-time multimedia stream...);

b) sending to said first candidate server a request for said first candidate server to provide said first multiple description bitstream (column 17, lines 49-52, Gold discloses a client requesting a real-time data stream; assigning the client to both a primary server...in response to said request);

c) sending to said second candidate server a request for said second candidate server provide said second multiple description bitstream (column 19, lines 65-67, Gold discloses the control server communicating an identifier of...the secondary server to the client, in response to the client requesting the data stream).

Gold fails to teach a first base station along a first path.

However, La teaches a first base station along a first path (figure 1, item BS1, BS2).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gold in view of La by providing a first base station along a first path. One would be motivated to do so to allow temporary contact with the mobile units when the data channel is lost.

Gold fails to teach a second base station along a first path.

However, La teaches a second base station along a second path (figure 1, item BS3, BS4).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gold in view of La to provide a second base station along a second path. One would be motivated to do so to allow alternate path to packets' transmission.

As to claim 25, Gold teaches the method for assigning servers to provide multiple description bitstreams to respective base stations as recited in claim 24.

Gold fails to teach step a) comprises receiving said request from said mobile client at a base station, and forwarding said request to one of said plurality of servers.

However, La teaches step a) comprises receiving said request from said mobile client at a base station, and forwarding said request to one of said plurality of servers (figure 1).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gold in view of La to provide a) comprises receiving said request from said mobile client at a base station, and forwarding said request to one of said plurality of servers. One would be motivated to do so to allow routing table entries used for packet delivery on a purely local subnet basis (see abstract).

As to claim 26, Gold teaches the method for assigning servers to provide multiple description bitstreams to respective base stations as recited in claim 24.

Gold fails to teach a) comprises identifying, from said plurality of servers, servers having a route to said first base station and said second base station to provide identified servers.

However, La teaches a) comprises identifying, from said plurality of servers, servers having a route to said first base station and said second base station to provide identified servers (figure 1; figure 10, item 350).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gold in view of La to provide a) comprises identifying, from said plurality of servers, servers having a route to said first base station and said second base station to provide identified servers. One would be motivated to do so to allow packets be tunneled for delivery of packets to the mobile device (see abstract).

As to claim 27, Gold teaches the method for assigning servers to provide multiple description bitstreams to respective base stations as recited in claim 26, wherein step a) comprises intelligently evaluating network parameters for each of said identified servers (column 5, lines 38-41, Gold discloses The control server assigns different identifiers to the streaming servers for delivering the multimedia data, and uses these identifiers to group the streaming servers into two or more different sets (1.5, 1.6)).

As to claim 28 Gold teaches the method for assigning servers to provide multiple description bitstreams to respective base stations as recited in claim 27, wherein step a) comprises intelligently evaluating system parameters such as server and network parameters selected from the group comprising:
Computation load (column 1, lines 24-25, Gold discloses a cluster of computing nodes (also called a multi-node cluster to handle the load; column 12, lines 22-24, Gold discloses he BAMBA player (client software) at the receiving client automatically calculates how much data to pre-load in order to maintain continuous playback);
Network bandwidth (column 12, lines 17-20, Gold discloses BAMBA not only achieves the low-bit-rate goal, but can also be extended to support higher-bit-rate

streams to provide higher-quality streaming over intranets or higher-bandwidth Internet connections); and

Potential that either said first or said second multiple description bitstreams are previously stored thereon for each of said identified servers (abstract, Gold discloses... the client receives the stream directly from a selected (primary) server; column 11, lines 26-27, Gold discloses these audio and video files are downloaded from a server and stored at the client before they are played).

Gold fails to teach a base station.

However, La teaches a base station (figure 1, items BS1...BS4).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gold in view of La to provide network bandwidth to base station. One would be motivated to do so to allow temporary contact with the mobile units when the data channel is lost.

As to claim 29, Gold teaches the method for assigning servers to provide multiple description bitstreams to respective base stations as recited in claim 24, further comprising the step of:

d) upon receiving said request for said first candidate server to provide said first multiple description bitstream along said first path, performing an admission process to determine whether said first candidate server will provide said first multiple description bitstream along said first path (column 5, lines 55-64, Gold discloses Each instance of the streaming process begins with a client agent 1.8 connecting to the control server 1.1 requesting the multimedia stream. The control server then assigns and redirects the client to one of the streaming servers in either of the two groups (1.5, 1.6). The assignment can be based on a conventional round-robin approach or based on some load-balancing heuristics. For example, the server 1.1 can redirect the client 1.8 to a streaming server based on a weighted round-robin approach, or to a streaming server having a lowest utilization rate; abstract, Gold discloses the client receives the stream directly from a selected (primary) server).

Gold fails to teach first base station along said first path.

However, La teaches first base station along said first path (figure 1, item BS1).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gold in view of La to provide upon receiving said request for said first candidate server to provide said first multiple description bitstream to said first base station along said first path, performing an admission process to determine whether said first candidate server will provide said first multiple description bitstream to said first base station along said first path. One would be motivated to do so to allow temporary contact with the mobile units when the data channel is lost.

As to claim 30, Gold teaches the method for assigning servers to provide multiple description bitstreams to respective base stations as recited in claim 24, further comprising the step of:

d) upon receiving said request for said second candidate server to provide said second multiple description bitstream along said second path, performing an admission process to determine whether said second candidate server will provide said second multiple description bitstream along said second path (column 5, lines 55-64, Gold discloses Each instance of the streaming process begins with a client agent 1.8 connecting to the control server 1.1 requesting the multimedia stream. The control server then assigns and redirects the client to one of the streaming servers in either of the two groups (1.5, 1.6). The assignment can be based on a conventional round-robin approach or based on some load-balancing heuristics. For example, the server 1.1 can redirect the client 1.8 to a streaming server based on a weighted round-robin approach, or to a streaming server having a lowest utilization rate; abstract, Gold discloses the client automatically detects load imbalance and/or failures (complete of partial) and dynamically switches to a secondary server).

Gold fails to teach a second base station along said second path.

However, La teaches a second base station along said second path (figure 1, item BS3).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gold in view of La to provide upon receiving said request for said second candidate server to provide said second multiple description bitstream to said second base station along said second path, performing an admission process to determine whether said second candidate server will provide said second multiple description bitstream to said second base station along said second path. One would be motivated to do so to allow temporary contact with the mobile units when the data channel is lost.

As to claim 31, Gold teaches the method for assigning servers to provide multiple description bitstreams to respective base stations as recited in claim 29, wherein said admission process of step:

d) provides an outcome selected from the group comprising: granting permission to provide said first multiple description bitstream, refusing permission to provide said first multiple description bitstream, and granting permission to provide said first multiple description bitstream with the identification an existing multiple description bitstream for potential redistribution to another of said plurality of servers (abstract, Gold discloses The client requests a multimedia stream through a control server or gateway which routes requests to the multimedia servers; and the client receives the stream directly from a selected (primary) server. The client automatically detects load imbalances and/or failures (complete or partial) and dynamically switches to a secondary server in order to continue receiving the real-time multimedia stream with minimal disruption and while maintaining a balanced load across multiple servers in a distributed network environment; column 3, lines 33-36, Gold discloses the control server is preferably a scalable server that is capable of handling a requests from a large number of incoming client agents and redirecting them to the streaming servers that are providing the multimedia data. The control server assigns different identifiers to the streaming

servers for delivering the multimedia data, and uses these identifiers to group these streaming servers into two or more different sets).

Gold fails to teach said first base station.

However, La teaches said first base station (figure 1, item BS1).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gold in view of La to provide provides an outcome selected from the group comprising: granting permission to provide said first multiple description bitstream to said first base station, refusing permission to provide said first multiple description bitstream to said first base station, and granting permission to provide said first multiple description bitstream to said first base station with the identification an existing multiple description bitstream for potential redistribution to another of said plurality of servers. One would be motivated to do so to allow mobile devices to attach to the wired portion of a packet-based network (see abstract).

As to claim 32, Gold teaches the method for assigning servers to provide multiple description bitstreams to respective base stations as recited in claim 30, wherein said admission process of step d) provides an outcome selected from the group comprising: granting permission to provide said second multiple description bitstream, refusing permission to provide said second multiple description bitstream, and granting permission to provide said second multiple description bitstream with the identification an existing multiple description bitstream for potential redistribution to another of said plurality of servers (abstract, Gold discloses The client requests a multimedia stream through a control server or gateway which routes requests to the multimedia servers; and the client receives the stream directly from a selected (primary) server. The client automatically detects load imbalances and/or failures (complete or partial) and dynamically switches to a secondary server in order to continue receiving the real-time multimedia stream with minimal disruption and while maintaining a balanced load across multiple servers in a distributed network environment; column 3, lines 33-36,

Gold discloses the control server is preferably a scalable server that is capable of handling a requests from a large number of incoming client agents and redirecting them to the streaming servers that are providing the multimedia data. The control server assigns different identifiers to the streaming servers for delivering the multimedia data, and uses these identifiers to group these streaming servers into two or more different sets).

Gold fails to teach said second base station.

However, La teaches said second base station (figure 1, item BS3).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gold in view of La to provide provides an outcome selected from the group comprising: granting permission to provide said second multiple description bitstream to said second base station, refusing permission to provide said second multiple description bitstream to said second base station, and granting permission to provide said second multiple description bitstream to said second base station with the identification an existing multiple description bitstream for potential redistribution to another of said plurality of servers. One would be motivated to do so to allow mobile devices to attach to the wired portion of a packet-based network (see abstract).

Claims 33-41 do not teach or define any new limitations above claims 24-32, and therefore are rejected for similar reasons.

5. ***Claim Rejections - 35 USC § 102***

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the

requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 42-59 are rejected under 35 U.S.C. 102(e) as being anticipated by Goldszmidt et al. (referred to hereafter as Gold) U.S. 6,195,680.

Gold teaches the invention as claimed including client-based dynamic switching of streaming servers for fault-tolerance and load balancing (abstract).

As to claim 42, Gold teaches a method for assigning servers to provide multiple description bitstreams to a fixed client, said method comprising the steps of:

a) upon receiving a request from a fixed client to have media data streamed thereto, analyzing a plurality of servers to determine a first candidate server for providing a first multiple description bitstream to said fixed client along a first path and a second candidate server for providing a second multiple description bitstream to said fixed client along a second path (abstract, Gold discloses...the client requests a multimedia stream through a control server or gateway which routes requests to the multimedia servers; and the client receives the stream directly from a selected (primary) server. The client automatically detects load imbalances and/or failures (complete or partial) and dynamically switches to a secondary server in order to continue receiving the real-time multimedia stream...);

b) sending to said first candidate server a request for said first candidate server provide said first multiple description bitstream to said fixed client (column 17, lines 49-52, Gold discloses a client requesting a real-time data stream; assigning the client to both a primary server...in response to said request); and

c) sending to said second candidate server a request for said second candidate server provide said second multiple description bitstream to said fixed client (column 19, lines 65-67, Gold discloses the control server communicating an identifier of...the secondary server to the client, in response to the client requesting the data stream).

As to claim 43, Gold teaches the method for assigning servers to provide multiple description bitstreams to a fixed client as recited in claim 42, wherein step a) comprises receiving said request from said fixed client at one of said plurality of servers, and forwarding said request to one of said plurality of servers (abstract, Gold discloses The client requests a multimedia stream through a control server or gateway which routes requests to the multimedia servers).

As to claim 44, Gold teaches the method for assigning servers to provide multiple description bitstreams to a fixed client as recited in claim 42, wherein step a) comprises identifying, from said plurality of servers, servers having a route to said fixed client to provide identified servers (column 3, lines 33-36, Od discloses the control server assigns different identifiers to the streaming servers for delivering the multimedia data, and uses these identifiers to group these streaming servers into two or more different sets).

As to claim 45, Gold teaches the method for assigning servers to provide multiple description bitstreams to a fixed client as recited in claim 44, wherein step a) comprises intelligently evaluating network parameters for each of said identified servers (column 5, lines 38-41, Gold discloses The control server assigns different identifiers to the streaming servers for delivering the multimedia data, and uses these identifiers to group the streaming servers into two or more different sets (1.5, 1.6)).

As to claim 46, Gold teaches the method for assigning servers to provide multiple description bitstreams to a fixed client as recited in claim 45, wherein step a) comprises intelligently evaluating system parameters such as server and network parameters selected from the group comprising: computation load (column 1, lines 24-25, Gold discloses a cluster of computing nodes (also called a multi-node cluster to handle the load; column 12, lines 22-24, Gold discloses he BAMBA player (client software) at the receiving client automatically calculates how much data to pre-load in order to maintain continuous playback);

network bandwidth to fixed client column 12, lines 17-20, Gold discloses BAMBA not only achieves the low-bit-rate goal, but can also be extended to support higher-bit-rate streams to provide higher-quality streaming over intranets or higher-bandwidth Internet connections); and

potential that either said first or said second multiple description bitstreams are previously stored thereon for each of said identified servers (abstract, Gold discloses... the client receives the stream directly from a selected (primary) server; column 11, lines 26-27, Gold discloses these audio and video files are downloaded from a server and stored at the client before they are played).

As to claim 47, Gold teaches the method for assigning servers to provide multiple description bitstreams to a fixed client as recited in claim 42, further comprising the step of: d) upon receiving said request for said first candidate server to provide said first multiple description bitstream to said fixed client along said first path, performing an admission process to determine whether said first candidate server will provide said first multiple description bitstream to said fixed client along said first path (column 5, lines 55-64, Gold discloses Each instance of the streaming process begins with a client agent 1.8 connecting to the control server 1.1 requesting the multimedia stream. The control server then assigns and redirects the client to one of the streaming servers in either of the two groups (1.5, 1.6). The assignment can be based on a conventional round-robin approach or based on some load-balancing heuristics. For example, the server 1.1 can

redirect the client 1.8 to a streaming server based on a weighted round-robin approach, or to a streaming server having a lowest utilization rate; abstract, Gold discloses the client receives the stream directly from a selected (primary) server).

As to claim 48, Gold teaches the method for assigning servers to provide multiple description bitstreams to a fixed client as recited in claim 42, further comprising the step of: d) upon receiving said request for said second candidate server to provide said second multiple description bitstream to said fixed client along said second path, performing an admission process to determine whether said second candidate server will provide said second multiple description bitstream to said fixed client along said second path (column 5, lines 55-64, Gold discloses Each instance of the streaming process begins with a client agent 1.8 connecting to the control server 1.1 requesting the multimedia stream. The control server then assigns and redirects the client to one of the streaming servers in either of the two groups (1.5, 1.6). The assignment can be based on a conventional round-robin approach or based on some load-balancing heuristics. For example, the server 1.1 can redirect the client 1.8 to a streaming server based on a weighted round-robin approach, or to a streaming server having a lowest utilization rate; abstract, Gold discloses the client automatically detects load imbalance and/or failures (complete of partial) and dynamically switches to a secondary server).

A to claim 49, Gold teaches the method for assigning servers to provide multiple description bitstreams to a fixed client as recited in claim 47, wherein said admission process of step d) provides an outcome selected from the group comprising: granting permission to provide said first multiple description bitstream to said fixed client, refusing permission to provide said first multiple description bitstream to said fixed client, and granting permission to provide said first multiple description bitstream to said fixed client with the identification an existing multiple description bitstream for potential redistribution to another of said plurality of servers (abstract, Gold discloses The client requests a multimedia stream through a control server or gateway which routes requests to the multimedia servers; and the client receives the stream directly

from a selected (primary) server. The client automatically detects load imbalances and/or failures (complete or partial) and dynamically switches to a secondary server in order to continue receiving the real-time multimedia stream with minimal disruption and while maintaining a balanced load across multiple servers in a distributed network environment; column 3, lines 33-36, Gold discloses the control server is preferably a scalable server that is capable of handling a requests from a large number of incoming client agents and redirecting them to the streaming servers that are providing the multimedia data. The control server assigns different identifiers to the streaming servers for delivering the multimedia data, and uses these identifiers to group these streaming servers into two or more different sets).

As to claim 50, Gold teaches the method for assigning servers to provide multiple description bitstreams to a fixed client as recited in claim 48, wherein said admission process of step d) provides an outcome selected from the group comprising: granting permission to provide said second multiple description bitstream to said fixed client, refusing permission to provide said second multiple description bitstream to said fixed client, and granting permission to provide said second multiple description bitstream to said fixed client with the identification an existing multiple description bitstream for potential redistribution to another of said plurality of servers (abstract, Gold discloses The client requests a multimedia stream through a control server or gateway which routes requests to the multimedia servers; and the client receives the stream directly from a selected (primary) server. The client automatically detects load imbalances and/or failures (complete or partial) and dynamically switches to a secondary server in order to continue receiving the real-time multimedia stream with minimal disruption and while maintaining a balanced load across multiple servers in a distributed network environment; column 3, lines 33-36, Gold discloses the control server is preferably a scalable server that is capable of handling a requests from a large number of incoming client agents and redirecting them to the streaming servers that are providing the multimedia data. The control server assigns different identifiers to the streaming

servers for delivering the multimedia data, and uses these identifiers to group these streaming servers into two or more different sets).

Claims 51-59 do not teach or define any new limitations above claims 42-50, and therefore are rejected for similar reasons.

6. Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to El Hadji M Sall whose telephone number is 571-272-4010. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on 571-272-4001. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

El Hadji Sall
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SALEH NAJJAR
PRIMARY EXAMINER